Patent claims

1.   A method for electrodynamically braking a rail vehicle which is equipped with a drive (6), wherein the acceleration (a_{act}) of the rail vehicle is regulated as a function of its velocity (v), characterized in that the acceleration (a_{act}) is regulated to a set point acceleration (a_{step}) which is proportional to the velocity (v).

2.   The method as claimed in claim 1, characterized in that the set point acceleration (a_{step}) for individual sections is proportional to the velocity (v).

3.   The method as claimed in one of claims 1 or 2, characterized in that in order to control the acceleration (a_{act}) indirectly, the torque (M_R) of the drive (6) is regulated.

4.   The method as claimed in claim 3, characterized in that a PI controller is used to control the torque (M_R).

5.   The method as claimed in one of claims 3 or 4, characterized in that when the torque (M_R) is controlled it is kept within predefined limits.

6.   The method as claimed in one of claims 3 to 5, characterized in that an additional torque (M_V) which is proportional to the set point acceleration (a_{step}) is added to the torque (M_R), and in that the proportionality constant is dependent on vehicle values.

7.   The method as claimed in claim 6,

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characterized in that the vehicle values are the vehicle mass, the transmission ratio and/or the diameter of the wheels.

5   8.   The method as claimed in one of claims 1 to 7, characterized in that the velocity (v) of the rail vehicle is determined from rotational speeds (n) of the drive (6) and/or of an axle.

10   9.   The method as claimed in one of claims 1 to 8, characterized in that the acceleration (a_{act}) is determined as a first derivative of the velocity (v).

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